We claim:

1   1. A method for representing network link and connection information in a graphical user
2   interface suitable for network management, comprising:

3   receiving information about network link state and connection status within a
4   network; and

5   operating an output device to:

6   represent each link in a first state as a line having a first visual characteristic;

7   represent each link in a second state that is different from said first state as a
8   line having a second visual characteristic, different from said first visual
9   characteristic; and

10   represent a connection on a given network link as a line having a third visual
11   characteristic, different from said first and second visual characteristics, such
12   that, when said given network link is in said first state, said line representing
13   said connection completely covers said line representing said given network
14   link and, when said given network link is in said second state, said line
15   representing said connection does not completely cover said line representing
16   said given network link.

1   2. The method of claim 1, wherein, when said given network link is in said second state,
2   said line representing said connection partially covers said line representing said given
3   network link.

1   3. The method of claim 1, wherein, when said given network link is in said second state,
2   said line representing said connection partially covers said line representing said given
3   network link such that a margin of said line representing said given network link is
4   visible.

1   4. The method of claim 1, wherein said first state is out-of-service and said second state is
2   in-service.

1   5. The method of claim 1, wherein said line having said first visual characteristic is a thin
2   and broken line and said line having said second visual characteristic is thicker than said
3   line having said first visual characteristic.

1   6. The method of claim 5, wherein said line having said third visual characteristic is a thin
2   and solid line that is at least the same thickness as said line having said first visual
3   characteristic and less thick than said line having said second visual characteristic.

1   7. The method of claim 5, wherein said line having said third visual characteristic further
2   includes a pattern that is different from said line having said first visual characteristic and
3   said line having said second visual characteristic.

1   8. The method of claim 1, wherein each of said line having said first visual characteristic,
2   said line having said second visual characteristic, and said line having said third visual
3   characteristic is a different color from the others.

1   9. A method for representing network link and connection information in a network
2   management graphical user interface comprising:

3   receiving information about link state and connection status within a network; and

4   operating an output device to:

5   represent out-of-service links with a thin broken line;

6   represent in-service links with a thick solid line, thicker than said thin broken
7   line; and

8   represent connections on a given link as a thin solid line that is at least as thick
9   as said thin broken line and thinner than said thick solid line.

1   10. The method of claim 9, wherein said thin solid line is overlayed on said thick solid line or
2   said thin solid line to represent a connection on a given link.

1   11. The method of claim 10, wherein said thin solid line obscures said thin broken line when
2   overlayed thereon.

1   12. The method of claim 9, wherein said thin broken line is a dashed line.

1   13. The method of claim 9, wherein each of said thin broken line, said thick solid line and
2   said thin solid line is a different color from the others.

1   14. The method of claim 9, wherein each of said thin broken line, said thick solid line and
2   said thin solid line is a different pattern from the others.

1   15. The method of claim 13, wherein said thick solid line is green in color.

1   16. The method of claim 13, wherein said thin solid line is yellow in color.

1   17. The method of claim 13, wherein said thin broken line is red in color.

1   18. A computer readable medium containing computer executable code for adapting a
2   computer input with network link and connection information to:

3   output each link in a first state as a line having a first visual characteristic;

4   output each link in a second state that is different from said first state as a line
5   having a second visual characteristic, different from said first visual
6   characteristic; and

7   output a connection on a given network link as a line having a third visual
8   characteristic, different from said first and second visual characteristics, such
9   that, when said given network link is in said first state, said line representing
10   said connection completely covers said line representing said given network
11   link and, when said given network link is in said second state, said line
12   representing said connection does not completely cover said line representing
13   said given network link.

1   19. The computer readable medium of claim 18, wherein, when said given network link is in
2   said second state, said line representing said connection partially covers said line
3   representing said given network link.

1   20. The computer readable medium of claim 18, wherein, when said given network link is in
2   said second state, said line representing said connection partially covers said line

3   representing said given network link such that a margin of said line representing said

4   given network link is visible.

1   21. The computer readable medium of claim 18, wherein said first state is out-of-service and

2   said second state is in-service.

1   22. The computer readable medium of claim 18, wherein each of said line having said first

2   visual characteristic and said line having said third visual characteristic is a different

3   pattern from the other.

1   23. The computer readable medium of claim 18, wherein each of said line having said second

2   visual characteristic and said line having said third visual characteristic is a different

3   pattern from the other.

1   24. The computer readable medium of claim 18, wherein each of said line having said first

2   visual characteristic, said line having said second visual characteristic, and said line

3   having said third visual characteristic is a different color from the others.

1   25. A network management tool comprising:

2   means for receiving information about network link state and connection status within

3   a network;

4   an output device; and

5   means for operating said output device to:

6   represent each link in a first state as a line having a first visual characteristic;

7   represent each link in a second state that is different from said first state as a

8   line having a second visual characteristic, different from said first visual

9   characteristic; and

10   represent a connection on a given network link as a line having a third visual

11   characteristic, different from said first and second visual characteristics, such

12   that, when said given network link is in said first state, said line representing

13   said connection completely covers said line representing said given network

14   link and, when said given network link is in said second state, said line

15   representing said connection does not completely cover said line representing

16   said given network link.

1   26. A graphical user interface for displaying network link and connection information, said

2   graphical user interface displaying:

3   each network link in a first state as a line having a first visual characteristic;

4   each network link in a second state that is different from said first state as a

5   line having a second visual characteristic, different from said first visual

6   characteristic; and

7   a connection on a given network link as a line having a third visual

8   characteristic, different from said first and second visual characteristics, such

9   that, when said given network link is in said first state, said line representing

10   said connection completely covers said line representing said given network

11   link and, when said given network link is in said second state, said line

12   representing said connection does not completely cover said line representing

13   said given network link.

14   27. The graphical user interface of claim 26, wherein said display of said connections is

2   independent of said display of said network links.